NOVA SCOTIA
Community Services

# *The Family Mosaic*

Educational Profiles of Mothers:
A Longitudinal Study of Lone-parent
and Two-parent Families

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## *Introduction*

Over the last generation, fertility rates have dropped below replacement level, the percentage of children born into single-parent families has increased substantially, divorce rates have increased ten-fold, and women's labour force participation rates have quadrupled (Nova Scotia Women's Directorate, 1995). The magnitude and speed of these changes have left us without a clear picture of what today's families really look like. Family life is both varied and dynamic. There are one- and two-parent families; single- and dual-earner families; blended, nuclear, and extended families. Families can be two-parent today and one-parent tomorrow; single-earner today and dual-earner tomorrow.

The Family Mosaic Research Project provides policymakers, practitioners, and the public with information about the ever-changing realities of life in both one- and two-parent families as children grow from infancy to adulthood. This project started over twenty years ago with a sample of 716[1] mothers who gave birth to their first child in a Nova Scotia hospital in 1978. The original sample was stratified on the basis of marital status. Half of the mothers were married when their first child was born and half were single when their first child was born. By drawing two comparable samples of married and single mothers, it is possible to give statistically-reliable estimates of outcomes for both family types. Weighting the data to compensate for the over-representation of single mothers also makes it possible to provide information on families in general.

Data collections for this project were conducted when the children were approximately six weeks, nine months, 18 months, 10 years, and 20 years of age. The six-week, nine-month, and 18-month data collections consisted of personal interviews with the mothers. The 10-year data collection consisted of personal interviews with mothers and psychological assessments of a random sample of 223 of the children. The 20-year data collection consisted of telephone interviews with both the mothers and their sons or daughters, who were, by then, young adults. Seventy percent (N = 500) of the mothers who started the project in 1978 were still

involved in the 1999 data collection. Eighty-six percent (N = 428) of the sons/daughters of these mothers also participated in the 1999 data collection. More detailed information on the study design and associated questionnaires can be found in the Methodology report (Dechman, 1999a).

This is the second in a series of reports from the Family Mosaic Research Project. The first report set the foundation for subsequent reports by describing the frequency and duration of periods of lone parenting. Future reports will examine outcomes for both mothers and children in one- and two-parent families. Particular attention will be paid to issues of employment, income, health, and well-being.

This report on mothers' education:

- outlines the educational attainment of mothers when their first child was born,
- describes subsequent educational pursuits of mothers in one- and two- parent families, and
- compares and contrasts final educational outcomes for mothers who were married throughout the entire time their children were growing up with mothers who had been lone parents at some time.

## *Policy and Research Context*

In modern society, educational attainment forms the basis for both the economic and social well-being of individuals and their families. "Education is an important determinant of one's position in society, affecting a person's participation in the community and likely success in the labour market" (de Broucker and Lavallée, 1998: 11). Earlier results from this study, as well as more recent findings from the National Longitudinal Survey of Children and Youth, have demonstrated the importance of mothers' education not only in influencing their own social and economic well-being but also as a precursor to outcomes for their children (Clark, 1993; McCloskey, 1998: 3; Lefebvre and Merrigan, 1998).

Results from Statistics Canada demonstrate some general differences in the educational attainment of mothers in one- and two-parent families. (Devereaux and Lindsay, 1993: 10). Census results for Nova Scotia in 1996 showed that approximately 42 percent of mothers in one-parent families as compared to 26 percent of mothers in two-parent families had not completed Grade 12 (Statistics Canada, 1997a). There were also indications that educational attainment differed between mothers who became lone parents because they were not married when their child was born and mothers who became lone parents through divorce. Among women with pre-school age children, married mothers had the highest levels of education, divorced mothers had somewhat lower levels of education, and single mothers had much lower levels of education (Crompton, 1994: 25-26, Cleveland and Hyatt, 1996: 6).

Some of the difference between married or divorced and single mothers is probably related to the age at which these women assumed the responsibilities of childrearing. A higher percentage of single than married mothers were teenagers (Statistics Canada, 1997b). This higher percentage of teenage women in the single group means that they would have had less time to develop their educational credentials before becoming mothers.

There have been extensive and lengthy discussions in the United States literature about the effects of teen parenting on educational attainment. In

the beginning, it was assumed that low levels of educational attainment among young mothers were caused by the disruption in schooling which occurred because of pregnancy (Geronimus and Koreman, 1993: 281). However, in more recent years, there has been substantial disagreement about the proportion of the variance in schooling that is explained by early pregnancy and the proportion of the variance in schooling that is explained by other associated factors, such as the socio-economic background of the mothers (Geronimus and Korenman, 1993; Upchurch and McCarthy, 1990; Wong and Checkland, 1999; Geronimus, 1991; Hoffman, Foster, and Furstenberg, 1993; Haggstrom, Kanouse, and Morrison, 1986; Fursentberg, 1991). The basic competing questions can be formulated as follows:

> Does teen pregnancy cause low educational attainment and subsequent negative outcomes for both mothers and their children?
>
> or
>
> Would the young women who became teen mothers have had low educational outcomes even if they had not had a child in their teens?

If one were to reconstruct this discussion based on a general outcome orientation, rather than through an "either/or" problem identification approach, the first thing that becomes clear is that educational attainment is important for the general well-being of families. Furthermore, education is becoming increasingly essential as we move toward more knowledge-based occupations. Global competitiveness depends on our ability to maximize human resources. Under such conditions, it would be reasonable to promote the outcome that all people be afforded the opportunity to live up to their full educational potential. We would then need to examine the conditions that foster or alternatively undermine educational attainment.

In general, educational outcomes have improved since the time the Family Mosaic Project began in 1978 (de Broucker and Laval Lavallée, 1998: 12; Statistics Canada, 1995). However, there are still striking

inequities in high school completion rates based on parental education and family structure. Educational outcomes for children in both one- and two-parent families are influenced by the educational attainment of their parents. High school completion rates range from a high of 94 percent for children in two-parent families where both parents have at least Grade 12 to a low of 59 percent in one-parent families where that parent has less than Grade 12 (Frederick and Boyd, 1998: 13). The high school completion rate of 86 percent in lone-parent families where the parent has a Grade 12 diploma is higher than the 71 percent completion rate in two-parent families where neither parent has completed Grade 12.

Discussions of population health and social cohesion are increasingly pointing to inequality as the root of many social and economic problems (Bessis, 1995; Health Canada, 1994). Countries with the least discrepancy between the richest and poorest income groups have the best population outcomes. Thus, in Canada, as well as in most other countries, where earnings are closely tied to education, it is important to strive for more equitable educational outcomes (Dechman, 1995: 4-11). If we are to provide all people the opportunity to live up to their full educational potential, it is important to understand the conditions underlying mothers' educational attainment and the mechanisms by which this in turn translates into educational outcomes for their children.

This report provides detailed information on the educational patterns of mothers in both one- and two-parent families. Educational differences that existed when these women became mothers tended to be perpetuated throughout the entire time they were raising their children. Women who were young and/or single when they had their first child started out with, and continued to have, lower levels of education than did mothers who were married and at least twenty years of age when they started parenting.

## *Initial Educational Attainment*

Forty-two percent of Nova Scotia women who had their first child in 1978, had not completed Grade 12 before they assumed the responsibilities of child rearing. Mothers who were married and over 19 years of age had higher levels of education than did mothers who were single and/or teenagers when their first child was born. Only 28 percent of married mothers over 19 years of age had not completed Grade 12 when their first child was born. By contrast,

- 62 percent of single mothers over 19 years of age,
- 71 percent of married mothers 19 or under, and
- 83 percent of single mothers 19 or under had less than Grade 12. (Cramer's V = .50***)[2]

Even when they had not completed Grade 12, mothers in the older age groups had often taken some type of technical or vocational training. One out of 2 of the married mothers who were over 19 years of age and had not completed high school had taken some other type of training. This was also the case for 1 out of 3 of the single mothers who were over 19. The most common situation was for these women to have taken secretarial or business training at their high school, rather than completing Grade 12. This educational pattern was much less common among younger mothers. Only 1 in 10 of the teenage-single and 1 in 5 of the teenage-married mothers who had not completed high school had taken some other type of training.[3]

Even though many mothers had not completed Grade 12, most were close to having done so. Only 13 percent had Grade 9 or less when they became a mother.[4] Teenage single mothers were the most likely to have low grade-level completion.

- 46 percent of single mothers 19 years of age or under,[5]

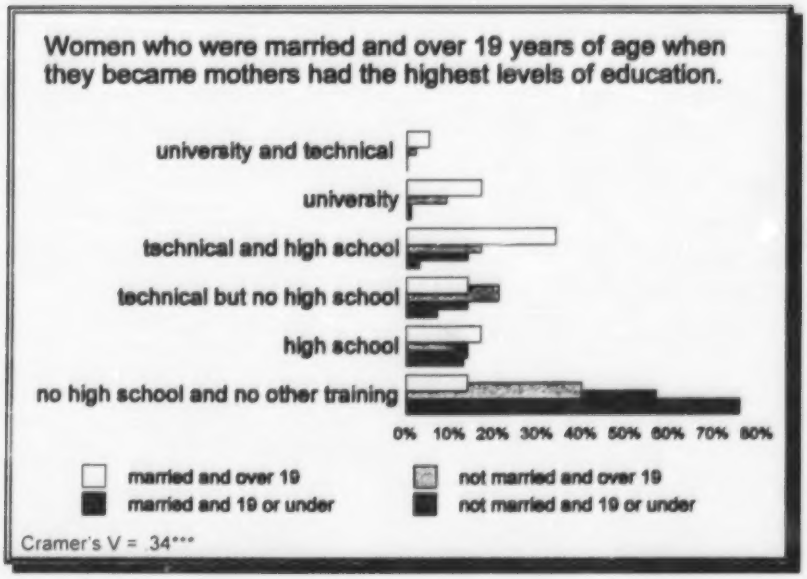
- 25 percent of married mothers 19 years of age or under,
- 19 percent of single mothers over 19, and
- 4 percent of married mothers over 19 had Grade 9 or less when their first child was born. (Cramer's V = .31***)

Women who were older when they had their first child obviously had had more time to acquire technical, vocational, or university training before becoming a mother.

- 34 percent of married mothers over 19,
- 17 percent of single mothers over 19,
- 14 percent of married mothers 19 or under, and
- 3 percent of single mothers 19 or under had both Grade 12 and some type of technical or vocational training before becoming a mother. (Cramer's V = .34***)[6]

Practically none of the teenage mothers had had any exposure to university before their first child was born.

- 22 percent of married mothers over 19 years of age had some university training,
- 11 percent of single mothers over 19 years of age had some university training,
- no married mothers 19 years of age or under had any university training, and
- 1 percent of single mothers 19 or under had some university training when their first child was born. (Cramer's V = .34***)[7]




Overall, there were clear and consistent differences in the educational attainment of women based on their age and marital status at the time they gave birth to their first child.

- Married mothers over 19 years of age held the highest levels of education,
- single mothers over 19 years of age had lower levels of education, and
- teenage mothers, whether single or married, had the lowest levels of educational attainment.

***Most women who had not completed Grade 12 before becoming a mother had left the school system before they became pregnant.***

While a large number of mothers had not completed high school when they had their first child, this does not necessarily mean their schooling was interrupted by the pregnancy. Among women who had not completed Grade 12 when their first child was born:

- 40 percent of single mothers 19 years of age or under,
- 70 percent of married mothers 19 years of age or under,
- 96 percent of single mothers over 19 years of age, and

- 94 percent of married mothers over 19 years of age, were not enrolled in an educational program when they became pregnant with their first child. (Cramer's V = .54***)[8]

While teenage single mothers were the most likely to still be in school when they became pregnant, even within this group, 40 percent had stopped going to school before their first child was conceived. Overall, approximately 3 out of 4 women who had not completed Grade 12 before their first child was born had left the educational system before they became pregnant.[9]

## *Continuing Their Education*

Overall, 64 percent of the women in this study took some type of additional education or training after becoming a mother. There were no significant differences in the probability of taking additional education based on the marital status of mothers when their first child was born.

- 70 percent of single mothers 19 years of age or under,
- 64 percent of married mothers 19 years of age or under,
- 70 percent of single mothers over 19, and
- 61 percent of married mothers over 19 years of age took some type of additional education or training while their children were growing up. (Cramer's V = .08 NS)[10]

Both mothers who had been married and mothers who had been single when their first child was born were likely to have continued their education after assuming the responsibilities of motherhood.

***What about women who had not completed Grade 12 before assuming the responsibilities of child rearing?***

Many mothers who had not completed Grade 12 went on to take some type of technical or vocational training even if they did not pursue

upgrading. Overall, 62 percent of the mothers who started out with less than Grade 12 took some type of technical, vocational, or upgrading courses after becoming mothers.

Approximately one-half of the women who had not completed Grade 12 before becoming a mother took academic upgrading after their first child was born.[11] While some mothers took upgrading through schools and community colleges, most mentioned having taken a General Equivalency Diploma (GED). Even after completing their GED, a number of women described how they were limited in their choices because this was not accepted as fulfilling the entrance requirements for some of the technical and vocational programs to which they applied. Getting up to a Grade 12 equivalency was particularly difficult for those who started parenting with less than Grade 10. Only 25 percent of those who started with less than Grade 10, as compared to 40 percent of those who started with Grade 10 or 11, eventually completed a Grade 12 equivalency.

While the previous section reported no overall differences between married and single mothers in terms of the probability of continuing their education, there were differences among those mothers who had not completed Grade 12 prior to becoming mothers. For those who had low levels of education, older married mothers were less likely to take additional education than were single and/or younger mothers.

- 70 percent of single mothers 19 years of age or under,
- 79 percent of married mothers 19 years of age or under,
- 70 percent of single mothers over 19, and
- 54 percent of married mothers over 19 who had not completed Grade 12 took some type of additional education or training while their children were growing up. (Cramer's V = .19*)[12]

The older married mothers who had not completed Grade 12 were particularly unlikely to take any more education during the time they had young children.

- Only 19 percent of the married mothers who were over 19 years of age and had not completed Grade 12 took any type of educational courses before their first child reached 10 years of age.

- 50 percent of single mothers 19 or under,

- 45 percent of married mothers 19 or under, and

- 57 percent of single mothers over 19 years of age who had not completed Grade 12 before their first child was born went on to pursue additional education when their child was under 10 years of age. (Cramer's V = .31***)[13]

Mothers who were over 19 years of age and married when their first child was born were much more likely than single and/or younger mothers to have completed Grade 12 before they assumed the responsibilities of parenting; however, those few older married mothers who had not completed Grade 12 were less likely to return to school after becoming mothers. At least part of the reason older married mothers were less likely to continue their education could have been because they often had secretarial or other vocational training even though they had not completed a Grade 12 certificate.

***Single mothers who did not increase their educational qualifications were likely to indicate that they would have liked to continue their education but felt constrained by competing demands.***

When their first child reached 10 years of age, mothers were asked to describe how satisfied they were with their education. The mothers who were single and 19 years of age or younger when their first child was born, continued to be particularly dissatisfied with their educational accomplishments. Given that the older married mothers started out with generally higher levels of education, it was not surprising they expressed the highest levels of satisfaction with their educational attainment. However, educational satisfaction was not totally tied to attainment. Even among women who had not completed Grade 12, married mothers were more likely to say they were satisfied with their education.[14]

The relatively high levels of satisfaction among married mothers were also reflected in perceptions of having control over their educational pursuits. Those women who were married when their first child was born and who did not continue their education were likely to see this decision as their choice.

"I devoted myself to my family and that was more important."

During both the 10- and 20-year interviews, mothers who had not taken any additional education were asked if they would have liked to have taken some type of course or training. For both time periods, the teenage single mothers were the most likely to have felt constrained by their circumstances. Among mothers who did not take any additional education before their child was 10 years of age:

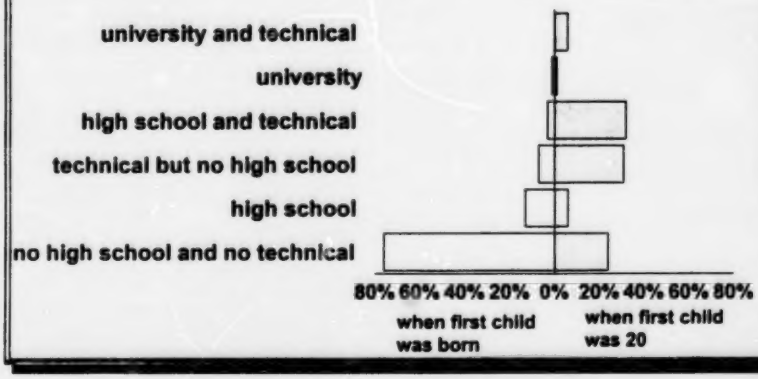
- 70 percent of the single mothers 19 or under said they would have liked to take some type of training,
- 43 percent of married mothers 19 or under,
- 32 percent of single mothers over 19, and
- 43 percent of married mothers over 19 who had not taken any education during this time period expressed such a desire. (Cramer's V = .22**)[15]

This pattern was also evident at the time of the 20-year data collection, with 61 percent of young single mothers who had not taken any additional education still expressing a desire to do so.[16] While the single teenage mothers started out with the lowest levels of education, even those who did not take any additional courses continued to express an interest.

## *Final Educational Attainment*

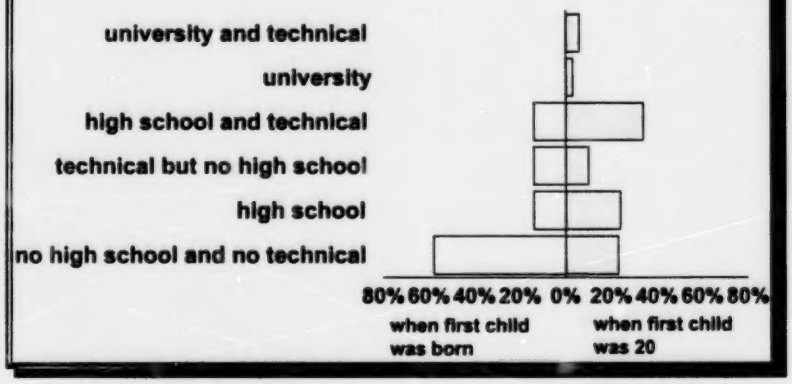
While seventy-six percent of the teenage single mothers started parenting without Grade 12 or any other type of training, only 24 were still without any educational credential when their first child

**Educational attainment of women who were single and 19 years of age or under when they had their first child.**


university and technical
university
high school and technical
technical but no high school
high school
no high school and no technical
80% 60% 40% 20% 0% 20% 40% 60% 80%
when first child was born
when first child was 20

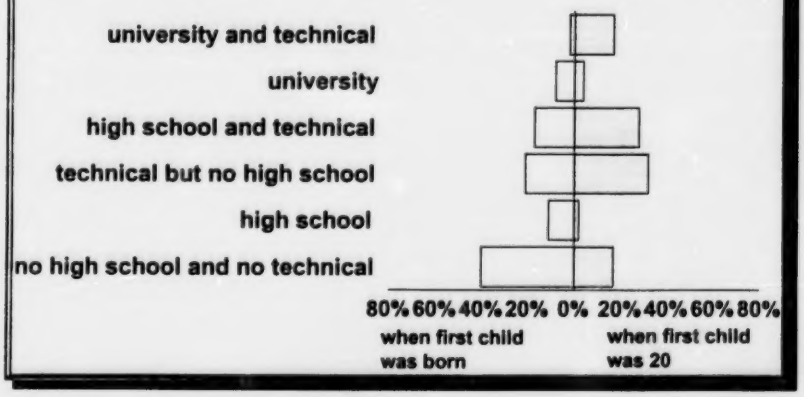
reached 20 years of age. The most common pattern was for these women to have taken some type of technical or vocational training in clerical, computer-related, health-care support or personal care areas. Thus, by the time their first child reached 20 years of age the most common educational profile for women who had started parenting as young single mothers was that they had some type of technical or vocational training.[17]

**Educational attainment of women who were married and 19 years of age or under when they had their first chid.**


university and technical
university
high school and technical
technical but no high school
high school
no high school and no technical
80% 60% 40% 20% 0% 20% 40% 60% 80%
when first child was born
when first child was 20

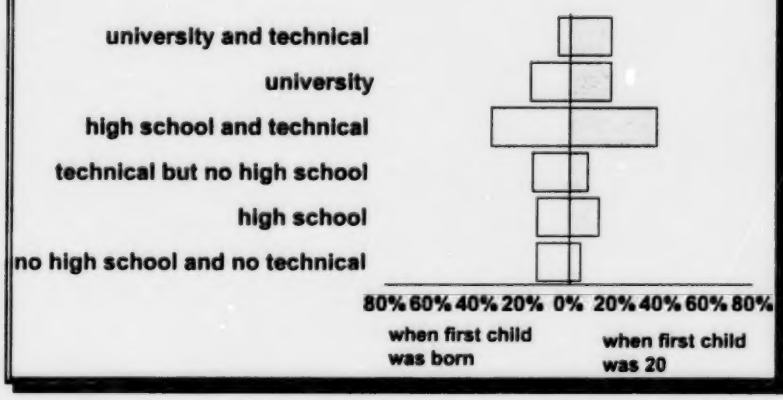
A quick visual comparison of the graphs for young single and young married mothers illustrates the general similarities. Fifty-seven percent of teenage married mothers started parenting without Grade 12 or any other training. Only 23 percent of these mothers still had no educational credentials when their first child reached 20 years of age. Like teenage single mothers, the most typical educational profile for these women over the course of the study was that they had some type of technical or vocational training.[18]

**Educational attainment of women who were single and over 19 years of age when they had their first child.**


university and technical
university
high school and technical
technical but no high school
high school
no high school and no technical
80% 60% 40% 20% 0% 20% 40% 60% 80%
when first child was born
when first child was 20

Older single mothers tended to start out and finish with slightly higher levels of education than did either the young single or young married mothers. Approximately 40 percent of this group, as compared to 57 percent of the young married mothers and 76 percent of the young single mothers, started parenting without any type of educational credentials. By the time their first child reached 20 years of age, only 17 percent still had not completed Grade 12 and had no other technical or vocational training. Similar to the younger mothers, the most common educational profile was for these mothers to have technical or vocational training. However, they were slightly more likely than their younger counterparts to have had some exposure to university.[19]

**Educational attainment of women who were married and over 19 years of age when they had their first child.**


university and technical
university
high school and technical
technical but no high school
high school
no high school and no technical
80% 60% 40% 20% 0% 20% 40% 60% 80%
when first child was born
when first child was 20

While the educational graph for older single mothers looks somewhat more favourable than the graphs for young single and young married mothers, the general patterns are similar. Looking at the graph for older married mothers, one is immediately

struck by a different picture. The educational starting point for married mothers over 19 years of age was much different than for the other three groups. Only 14 percent of these mothers started parenting without Grade 12 or any technical or vocational training. This original educational advantage also formed the foundation for distinctly different final outcomes. By the time their first child reach 20 years of age, the vast majority of these older married mothers had completed Grade 12 and usually had technical and/or university training.[20]

Despite concerted efforts to upgrade their education, mothers who were single and/or under 20 years of age when they started parenting continued to have lower levels of education than did mothers who were both over 19 and married when they started parenting. By the time their first child reached 20 years of age:

- 80 percent of mothers who had been married and over 19 years of age when their first child was born had completed Grade 12.
- 53 percent of mothers who had been married and 19 or under,
- 51 percent of mothers who had been single and over 19, and
- 46 percent of mothers who had been single and 19 years of age or under when their first child was born had completed Grade 12 by the time that child reached 20 years of age.[21]

Regardless of age or marital status, most mothers had some type of technical or vocational certificate or diploma. By the time their first child reached 20 years of age, there was no significant difference in terms of the probability of holding a technical or vocational certificate or diploma.

- 59 percent of single mothers 19 years or under,
- 57 percent of married mothers 19 years or under,
- 67 percent of single mothers over 19, and

- 62 percent of married mothers over 19 held a technical or vocational diploma by the time their first child reached 20 years of age. (Cramer's V = .06 NS) [22]

While most mothers had some type of job-related credentials, this does not mean they had obtained a diploma from a community college or vocational school. Many of the certificates were for short courses of few weeks or few months in areas such as personal care work or hospitality.

University training was much more prevalent among the older married mothers (35 percent) than for any of the other groups. While some of the older single mothers had also gone to university (21 percent), this was very unusual for teenage mothers, with only 7 percent of teenage single mothers and 10 percent of teenage married mothers having had any exposure to university. (Cramer's V = .23***)[23]

University degree completion was practically non-existent among women who became mothers before they reached 19 years of age.

- 1 percent of single mothers 19 years of age or under,
- 5 percent of married mothers 19 years of age or under,
- 13 percent of single mothers over 19 years of age, and
- 25 percent of married mothers over 19 years of age had completed a university degree by the time their first child reached 20 years of age. (Cramer's V = .29***)[24]

Even after 20 years, married mothers who were over 19 years of age when their first child was born continued to be the most educationally-advantaged group. Twenty years after their first child was born:

- those mothers who started parenting when they were under 19 years of age and single had an average of 11.4 years of education,[25]

- mothers who started parenting when they were under 19 years of age and married had an average of 11.8 years of education,

- mothers who started parenting when they were over 19 years of age and single had an average of 12.5 years of education,

- mothers who started parenting when they were over 19 years of age and married had an average of 13.9 years of education (F = 32.21***).[26]

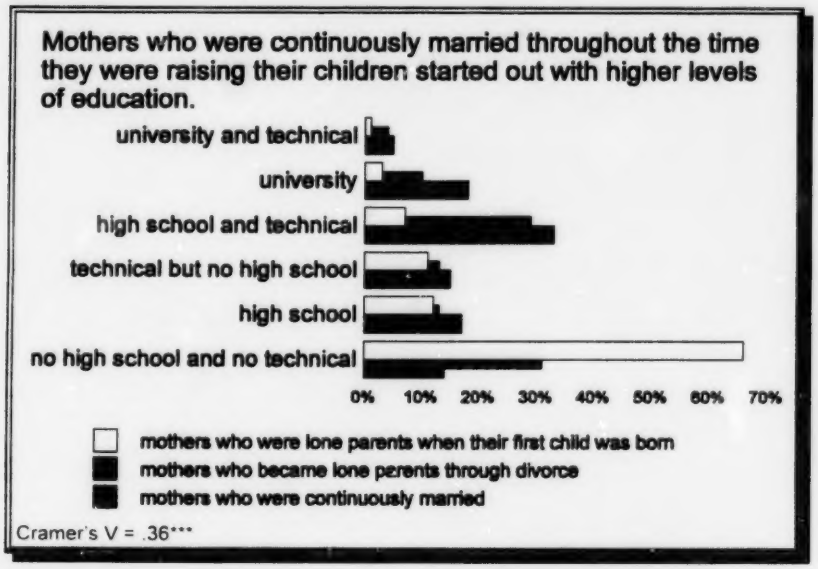
Thus, initial differences in educational attainment persisted over time.

- Mothers who were married and over 19 years of age when they had their first child started out as, and continued to be, the most educationally advantaged group. Eighty percent of these women had completed Grade 12 and most also had some type of post secondary technical, vocational, or university training.

- Mothers who were single and over 19 years of age when they had their first child started out with and continued to have lower educational credentials. Only, about 50 percent of these mothers had completed Grade 12. However, most had some type of technical, vocational, or university training.

- Mothers who were under 19 years of age when they had their first child started out with and continued to have even lower levels of schooling, regardless of whether they were married or single. Similar to the older single group, only about 50 percent of these mothers had completed Grade 12. While many of these young mothers had taken job-related courses, their average years of schooling tended to be even lower than for the older single group and virtually none had had an opportunity to attend university.

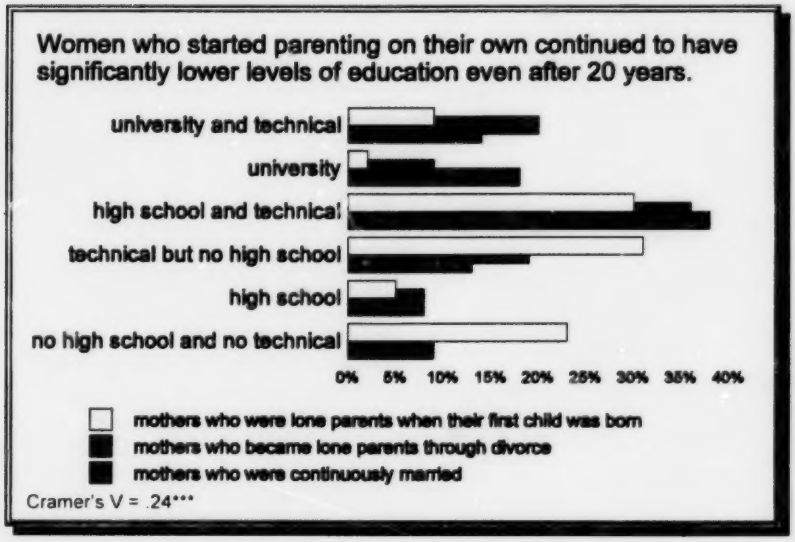
***The educational attainment of mothers who became lone parents through divorce was not significantly different from the educational attainment of mothers who were continuously married.***


Mothers who were continuously married throughout the time they were raising their children started out with higher levels of education.
university and technical
university
high school and technical
technical but no high school
high school
no high school and no technical
0%
10%
20%
30%
40%
50%
60%
70%
mothers who were lone parents when their first child was born
mothers who became lone parents through divorce
mothers who were continuously married
Cramer's V = .36***

When discussing lone-parent families, most people have a vision of mothers who were married and then later divorced, rather than mothers who became lone parents because they were not married when their first child was born.[27] As indicated in the introduction to this report, Statistics Canada results have demonstrated differences in the educational attainment of mothers with preschool children: married mothers had the highest levels of education, divorced mothers had somewhat lower levels of education, and single mothers had the lowest levels of education (Crompton, 1994: 25-26; Cleveland and Hyatt, 1996). Results from the Family Mosaic Project demonstrated similar results when the children were infants. Those mothers who were initially married and continued to be married throughout the entire 20 years of the project started parenting with higher levels of education than did either mothers who were initially married and later divorced, or mothers who were single-parents when their first child was born.[28]

However, educational differences between the continuously married and divorced mothers diminished over time because mothers who divorced were more likely to increase their education than were mothers who remained married.

- 56 percent of those mothers who were married for the entire time their child was growing up took some type of education or training,
- 70 percent of those mothers who were single when their first child was born took some type of education or training, and
- 77 percent of those mothers who were initially married but later divorced took some type of education or training. (Cramer's V = .19**)[29]


Women who started parenting on their own continued to have significantly lower levels of education even after 20 years.
university and technical
university
high school and technical
technical but no high school
high school
no high school and no technical
0% 5% 10% 15% 20% 25% 30% 35% 40%
mothers who were lone parents when their first child was born
mothers who became lone parents through divorce
mothers who were continuously married
Cramer's V = .24***

By the time their children reached 20 years of age, there was little difference between the educational attainment of mothers who were continuously married and mothers who were originally married and later divorced. The most significant and persistent difference was between women who were married when their first child was born, whether or not they later divorced, and women who were not married when their first child was born. Those mothers who were not married when their first child was born started with lower levels of education and continued to have lower levels of education throughout the entire time their children were growing up. When their first child reached 20 years of age, the average numbers of years of schooling were:

- 13.5 years for those who were continuously married,
- 13.4 years for those who were married when they had their first child but later divorced, and

- 11.7 years for those who were not married when their first child was born. (F=15.8***)[30]

As demonstrated throughout the earlier sections of this report, differences between those who were married when their first child was born and those who were single when their first child was born were at least partially related to the age at which these women became mothers.

## *Perceived Obstacles to Continuing Their Education*

When asked what made it difficult to continue their education, mothers focused on family and employment demands.

"I'd love to attend school but I can't work full time and go to school."

"Work and school would have been a lack of responsibility for my children."

"There's just not enough time - raising children by myself and having to work."

When their children were 10 years of age, both those mothers who were continuously married and those who had been lone-parents at some time frequently mentioned that caring for their children made it difficult for them to continue their education. However, family responsibilities tended to be a more long-lasting obstacle for lone-parent mothers. Among mothers who would have liked to continue their education after their first child was 10 years of age but did not:

- 55 percent of those mothers who were not married when their first child was born,

- 66 percent of those mothers who were married when their first child was born and later divorced, and

- 38 percent of those mothers who were continuously married mentioned family responsibilities as making it difficult for them to continue their education.[31]

The prevalence of family demands as an obstacle to educational pursuits for single and divorced mothers was related not only to the intensive demands of single parenting as mentioned above, but also to the spacing of children. Mothers who were single or divorced tended to have more lengthy time periods for which they were responsible for young children. Many mothers married or remarried and had subsequent children when their first children were older.

The longer mothers were out of the educational system, the harder it was for them to go back. Some mothers mentioned the difficulties of getting back into schooling after having been out for so many years.

> "It's embarrassing to go to learn to read and write at 38."

> "I would have to learn to study again. I was almost afraid to go back. I guess I lack confidence."

At the time of the 20-year interview, all respondents were asked what they thought could be done to help mothers continue their education. While some mothers talked about program availability, transportation, and motivation, the most frequently-mentioned issues were child care and financial assistance.[32]

> "I've told my children they should finish their education first. I really wish I had asked my family for more financial help. I think there should be some government help, but people need to help themselves. Maybe they could help mothers with child care while mothers are in school."

> "I would have gone to school when my children were younger if I had the money and this would have given me a better means to bring up my children."

## *Summary of Key Points*

While mothers' education has been cited as a primary determinant of both their own and their children's well-being, much less is known about the dynamics of educational attainment. The relationship between family structure and mothers' educational attainment is somewhat complex.

- Lone-parent mothers had generally lower levels of educational attainment than did mothers in two-parent families.

- However, results from the Family Mosaic Project demonstrate that differences in educational attainment were linked to the manner by which women became lone-parents. Those mothers who became lone-parents through divorce had essentially the same educational qualifications as those mothers who were continuously married throughout the time their children were growing up. By contrast, those mothers who were lone-parents at the time their first child was born had much lower levels of education than did either their continuously married or divorced counterparts.

- Some of the difference between the education levels of mothers who were married and mothers who were single when their first child was born was related to the age at which these women assumed the responsibilities of parenting. More of the single than the married women were still in their teens when they became mothers.

- Both teenage single and teenage married mothers tended to have relatively low levels of education.

- This does not, however, mean that early pregnancy was the primary reason for low educational attainment. The majority of mothers who had not completed Grade 12 before their first child was born had left the school system before becoming pregnant.

- Overall, those mothers who were over 19 years of age and married when their first child was born started out with and continued to

have the highest levels of education throughout the time they were raising their children. While mothers who were over 19 years of age and single when their first child was born had substantially lower levels of education, women who became mothers when they were still teenagers had the lowest levels of education, regardless of whether they were married or single.

## *Discussion*

The media are quick to point out differences between one- and two-parent families in relation to issues such as poverty and child outcomes. However, in-depth analyses of the nature of these differences are rather sparse. One difference between one- and two-parent families is that mothers in one-parent families tend to have lower levels of education than do mothers in two-parent families.

These differences in educational attainment also reflect the circumstances by which families became one-parent. Results from the Family Mosaic Project showed that mothers who were continuously married throughout the entire time their children were growing up tended to have started childrearing with somewhat higher levels of education than did mothers who were married when their child was born but later divorced. On the other hand, women who divorced at some time while their children were growing up were more likely to have taken additional training. Thus, by the time their children reached 20 years of age there was little difference between the educational attainment of mothers who were continuously-married and mothers who started out married but later divorced.

Mothers who started childrearing as lone parents presented very different educational profiles. These women began with and continued to have distinctly lower levels of education than did their married or divorced counterparts. Some of this difference was associated with the ages at which single and married women started childrearing. Women who were single and over 19 years of age when their first child was born had lower levels of education than did women who were married and over 19 years of age when their first child was born. Women who were 19 years of age or under when their first child was born tended to have significantly lower levels of education, regardless of whether they were single or married when they started childrearing.

About one quarter of the women who had not completed Grade 12 before assuming the responsibilities of childrearing in 1978 would have fit the profile of teenage mothers whose schooling may have been interrupted by pregnancy. However, the remaining three quarters of the women who

had not completed Grade 12 before becoming a mother had left the school system before they became pregnant. Some of these women were still teenagers and some were beyond school age but what they had in common was that their departure from the school system happened prior to, and therefore was not caused by, their pregnancy. This information applies to women who started parenting over twenty years ago and should not be viewed as reflective of today's situation. Subsequent analyses of the educational patterns of the young adults in this study will provide a better understanding of current educational trends.

It was clear many lone-parent mothers perceived a need to enhance their educational credentials. Approximately three-quarters of lone-parent mothers, in comparison to about half of the mothers who were continuously married, took additional education or training. However, many of the women who were lone parents when their first child was born started out with relatively low levels of education. Care giving and financial demands then made it difficult for them to catch up with their married counterparts who had completed higher levels of education before becoming mothers.

Employment and income are closely linked to educational attainment. Women who have not completed Grade 12 tend to have low levels of employment and low incomes (Statistics Canada, 1995; Dechman, 1995). These circumstances, in turn, have been shown to promote negative outcomes for both the women and their children. If improving outcomes for families and children is, to a large extent, linked to improving the education of existing or prospective parents, we need to think seriously about how we provide a context within which all people are accorded the opportunity to live up to their full educational potential. Subsequent reports from this project will examine the association between mothers' educational profiles and the educational patterns of their children.

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## *Notes*

1. This number excludes 26 of the original mother-child dyads because: the mother died, the child died, the child was adopted or the child was made a ward of the court before the time of the 10-year data collection.

2. N = 434. The overall percentage (42 percent) is closest to the percentage for the older married group because this group represents the majority of mothers.

   These percentages are based on respondents who participated in both the first and final data collections. This is to permit comparisons between initial and final educational attainment. The procedure of focussing on only continuous respondents and the separate analysis of common-law couples means that the percentages currently reported are not exactly the same as the percentages reported in the "Mothers and Children" book published at the time of the 10-year data collection. However, substantive differences across groups are consistent with the earlier reported findings.

   Seventy-nine percent of the mothers in common-law relationships also had not completed Grade 12 when their first child was born (N = 35). There were insufficient cases to provide percentages for common-law couples by age groups; however, the teenage common-law mothers followed the trend of being less likely to have completed Grade 12.

   Cramer's V is used as a measure of association for nominal data. "Cramer's V can only be thought of as a magnitude on a scale between zero and one; the bigger the number the stronger the association. It can not be interpreted, for example, as the percentage of variation in one variable explained by another, nor can it be interpreted as the proportion of predictive errors which may be reduced by prior knowledge of one of the variables" (Loether and McTavish, 1974: 197, 198). * means p <= .05, ** means p <= .01, *** means p <= .001.

3. Mothers in common-law relationships followed the same trends with the younger common-law mothers being less likely to have taken any other type of training outside the regular school system.

4. Weighted data N = 456.

5. N = 434 mothers who participated in both the first and final data collections. These findings are consistent with results from Sorenson et al. who reported that approximately one-third of the teenage mothers, including both single and married, in their 1985 Ontario study had less than Grade 10 when their first child was born (Sorenson, Avison, Brownfield, and Grindstaff, 1999: 8).

   Thirty-eight percent of the mothers in common-law relationships had Grade 9 or less education when their first child was born.

6. This Cramer's V represents the distribution of educational attainment by age and marital status of the mother across five educational categories: not completed high school and no technical, not completed high school but some technical training, completed high school and no other training, completed high school and technical training, university, and university and technical training. N = 434.

Although there were insufficient cases to provide statistically reliable estimates, the findings for mothers in common-law relationships were similar to the findings for single mothers.

7. This Cramer's V represents the distribution of educational attainment by age and marital status of the mother across six educational categories: not completed high school and no technical, not completed high school but some technical training, completed high school and no other training, completed high school and technical training, university, and university and technical training. N = 434.

   None of the mothers in common-law relationships had attended university before their first child was born.

8. N = 220 mothers who had not completed Grade 12 when their first child was born and who participated in both the first and final data collections. The percentages reported here are not exactly the same as those reported in the Mothers and Children publication from the 10-year data collection because the common-law couples have been analysed separately and these analyses only include those respondents who continued for the final data collection.

   The trends for mothers in common-law relationships were similar to the other groups, with teenage mothers being more likely than older mothers to have been enrolled in an educational program when they became pregnant.

9. Weighted data, N = 189 mothers who participated in both the first and final data collections and had not completed Grade 12 before their first child was born.

   This finding is consistent with results from the 1991 Statistics Canada School Leaver Survey that reported that only 1 out of 10 young women who dropped out of school did so because of pregnancy (Statistics Canada, 1991: 2).

   In 1978, births to unmarried mothers were approximately equally split between the 19 and under and over 19 categories. Today, three-quarters of births to unmarried mothers are to women who are in the older age group. This is due, in large part, to the general aging of the population. For those mothers who have not completed high school today, departure from school probably occurred prior to pregnancy.

10. N = 483. Approximately 60 percent of the mothers in common-law relationships also took additional education before their first child reached 10 years of age.

11. Weighted data, N = 210 mothers who completed both the first and final data collections and who had not completed Grade 12 when their first child was born. While older married mothers were slightly less likely to take upgrading, differences were not statistically significant. Even though most of those who took upgrading did so while their children were still relatively young, it was not uncommon for mothers to upgrade their education after their first child reached 10 years of age. One mother and her daughter were doing upgrading together at the time of the 20-year interview.

12. N = 215.

13. N = 216.

14. Among mothers who had not completed Grade 12 when their first child reached 10 years of age, 55 percent of those mothers who were married and over 19 when their first child was born, 37 percent of single mothers over 19, 48 percent of married mothers 19 and under, and only 17 percent of single mothers 19 and under indicated they were satisfied with their education. (Cramer's V = .25**)

15. N = 269 mothers who had not taken any education or training between the time their first child was born and when that child reached 10 years of age. Approximately half of the mothers in common-law relationships who had not taken any training indicated that they would have liked to have taken more education.

16. While the teenage single mothers continued to express a desire to continue their education, the majority of single mothers over 19 years of age who had not continued their education also expressed the desire to do so, 67 percent by the time their children reached 20 years of age. The married mothers over 19 and married mothers 19 or under were much less likely to wish they had been able to continue their education, with 45 and 48 percent of those who had not continued their education expressing the desire to do so. N = 220 mothers who did not take any education or training between the time their first child was 10 and 20 years of age.

17. N = 95 respondents who were single and under 19 years of age when their first child was born and who participated in the final data collection. The estimates provided in this report probably err on the side of being more positive than is really the case as attrition rates were highest among the mothers in this group with the lowest levels of education.

18. N = 49 respondents who were married and under 19 years of age when their first child was born and who had educational information from the first data collection. N = 113 respondents who were married and under 19 years of age when their first child was born and who had educational information from the final data collection. This includes the additional young married mothers who were added at the time of the 10-year data collection. The information was double checked and found to be consistent for mothers who participated in both the initial and final data collections. The estimates provided in this report probably err on the side of being more positive than is really the case as attrition rates were highest among the mothers in this group with the lowest levels of education.

19. N = 47 respondents who were single and over 19 years of age and who participated in both the first and final data collections.

20. N = 242 respondents who were married and over 19 years of age and who participated in both the first and final data collections.

21. N = 497. Sorenson et al.'s study of teenage mothers in Ontario included both single and married mothers. By the time their children reached 12 years of age over half of these mothers had completed Grade 12 (Sorenson, Avison, Brownfiels, and Grindsfaff, 1999).

22. N = 473.

23. This Cramer's V is for the range of educational attainment outlined in note number 6 and does not apply exclusively to university training. N = 497.

24. N = 449.

25. There were some differences in attrition based on educational attainment. In both the teenage single and teenage married groups, the mothers who were located for the 20-year data collection were more highly educated at the 10-year interview than were the mothers who were not located for the 20-year data collection. There were no differences in the educational attainment of mothers in the older groups based on attrition. Therefore, differences in educational attainment based on age were probably even more pronounced than appears to be the case in this data.

26. N = 452. Sheffe Post Hoc comparisons show significant differences (at .001) between the older married mothers and all other groups. Differences across the other three groups are not significant at the .05 level. Levene's test of homogeneity of variances shows no significant differences across groups. The mean number of years of schooling for young common-law mothers was 11.6 and 11.2 for older common-law mothers.

27. Results from Statistics Canada present the following breakdown by marital status for lone-parent mothers in 1991: 19 percent never married, 25 percent separated, 33 percent divorced, 24 percent widowed (Péron, 1999: 94). The percentage of never-married mothers at any point in time is lower than the percentage of mothers who were not married when they started parenting. Some of the women who are recorded as divorced would have started out as single mothers, later married, and then divorced.

28. This is not meant to imply that the results from this study are exactly comparable to the Statistics Canada information. Many of the mothers were divorced after their children were preschoolers. The Statistics Canada information was mentioned to demonstrate that other studies have shown differences in educational attainment between mothers who were lone parents when their first child was born and mothers who became lone parents through divorce.

29. Weighted data, N = 482. This pattern was consistent and even stronger for mothers who had not completed Grade 12 before their first child was born. When selected for only those mothers who had not completed Grade 12 prior to becoming a mother, 47 percent of continuously married, 71 percent of divorced, and 70 percent of mothers who were single when their first child was born took additional education or training. (Cramer's V = .21***) When comparing continuously married with divorced and initially single mothers, common-law relationships were considered as equivalent to married and therefore would fall within the continuously married or divorced groups.

30. Sheffe Post Hoc comparisons at .0001 demonstrate significant differences between the continuously married and initially single, the divorced and initially single, but not between the continuously married and divorced. Weighted data N = 484. The Levene test of homogeneity of variances shows no significant differences for groups.

31. Multiple response variable with 110 responses.

32. This coincides with results from Sorenson et al.'s longitudinal study of teenage mothers in Ontario. These Ontario mothers also reported family responsibilities and financial problems as the main obstacles to continuing their education (Sorenson, Avison, Brownfield, and Grindstaff, 1999).